

# Primary care

## Networks for research in primary health care

Paul Thomas, Frances Griffiths, Joe Kai, Aislinn O'Dwyer

*Editorial by Green and Dovey*

Department of Primary Health Care and General Practice, Imperial College School of Medicine, Charing Cross Campus, Reynold's Building, London W6 8RP

Paul Thomas  
*director of West London Research Network*

Centre for Primary Health Care Studies, University of Warwick, Coventry CV4 7AL  
Frances Griffiths  
*clinical senior lecturer*

Department of Primary Care and General Practice, University of Birmingham, Birmingham B15 2TT

Joe Kai  
*clinical senior lecturer*

North West Primary Care Research and Development Programme, NHS Executive North-West, Millennium Park, Birchwood, Warrington WA3 7QN

Aislinn O'Dwyer  
*programme manager*

Correspondence to: P Thomas  
p.r.thomas@ic.ac.uk

BMJ 2001;322:588-90

The evolution of the academic discipline of primary care throughout the world is resulting in more primary care practitioners taking part in research. Primary care has a generalist nature,<sup>1</sup> and several research approaches are therefore required to understand the complex interplay between medical and psychosocial factors in the discipline.<sup>2</sup> Collaboration is needed between primary care professionals (general practitioners, nurses, health visitors, etc) and a variety of academics with a breadth of expertise.<sup>3</sup> In this article we give an overview of primary care research networks. These networks were established as a way to enable diverse practitioners to engage in research. We start by outlining what these networks are and what they do, using examples from the United Kingdom and elsewhere. We then go on to discuss the lessons learnt from UK experience and suggest how these lessons can be built on through better integration with emerging primary care structures.

### Origins of primary care research networks in the United Kingdom

Primary care research networks began to develop in the United Kingdom in the 1960s (box), but until recently there has been little political recognition of their importance. Primary care research was specifically included in the NHS research and development strategy for England and Wales for the first time in 1997. Before then there was no acknowledgement in government of the need to address the low research capacity of primary care. In 1997, the research and development in primary care national working group recommended an investment in care research networks to "achieve an evidence based culture in primary care."<sup>4</sup>

The research activity of the networks has included collection of morbidity data, clinical research, practice based research, large multicentre trials, and research training. Building on this experience, the NHS Executive funded primary care research networks in England and Wales from 1998 in order to increase the capacity for research in primary care.<sup>8</sup> Networks were thought to be a good method of engaging and training practitioners in research. The UK Federation of Primary Care Research Networks was formed in 1998 to support these new entities, and it currently has over 30 member networks.

Recently published research arising from UK networks shows the breadth of research issues being

### Summary box

Research networks have been established throughout the United Kingdom and internationally to develop research and education in primary health care and implement research evidence

These networks can enable multidisciplinary coalitions of researchers to address diverse research agendas

Networks may use different organisational approaches including bottom up, top down, and whole systems approaches; most use a combination

Research networks can work with those involved locally in professional education, quality assurance, and service development to produce evidence that is relevant to primary care

undertaken—for example, clinical research,<sup>9</sup> social research,<sup>10</sup> and research into complex interventions.<sup>11 12</sup> A survey of general practitioners in southern England showed that nearly all considered research to be important and over half were interested in doing research themselves. Most practitioners were interested in research into disease processes, but nearly half considered that organisational and behavioural research were emerging priorities for primary care research.<sup>13</sup> This grass roots view might reflect the increasing organisational complexity of primary care.

The need for organisational research has been noted elsewhere. The Medical Research Council topic review identifies "the theoretical basis of innovation in complex systems" as a priority for research,<sup>14</sup> and the NHS strategic review identifies research gaps in understanding how to make research relevant to local contexts.<sup>15</sup> Views on research priorities are changing rapidly. Research networks may be able to engage their members in ongoing dialogue about what they perceive the research priorities to be. This iterative approach has been successful at identifying the research needs of Australian farmers, encouraging them to become researchers and finding creative new ways forward with research findings.<sup>16</sup>

## International developments

Research network activity in primary care has developed around the world. In the United States several small and large networks have emerged since 1980. For example, the Ambulatory Sentinel Practice Network has successfully recruited large numbers of patients to studies in the United States and Canada.<sup>17</sup> The Dutch Sentinel Stations in the Netherlands have been gathering data since 1970. Health sector reforms in eastern Europe have prompted international collaboration through networks. For example, the European General Practice Research Workshop is facilitating collaboration between several eastern European countries, and Scandinavian general practice researchers network with primary care workers in the Baltic states. Further examples of different styles of general practice networks in Israel, France, and the United Kingdom are available on the *BMJ's* website. Each of the three networks described has been able to operate large scale collaborative projects and small scale personally developed projects at the same time.

Outside mainstream general practice, networks of researchers throughout the world have been active in primary care since at least the 1970s. There are many examples from India, Bangladesh, Australia, and Africa.<sup>18</sup> These projects have largely been supported by non-governmental organisations and revolve around local communities rather than healthcare professionals. They have tended to emphasise participatory and action oriented approaches to research because such approaches help empower local people to cause much needed change.<sup>19</sup>

## Features of primary care research networks

A network provides a set of pathways for people and ideas to come together. Networks can help coordinate diverse activities and disseminate information quickly, membership can be closed or open, and the direction can be rigidly defined or self organised. Closed, rigidly defined networks—for example, road systems—tend to have outcomes that are more predictable. Open, self organising networks—for example, the internet—tend to have more uncertain but perhaps more creative outcomes.

Research networks may be able to produce multidisciplinary coalitions of researchers, provide widespread ownership of research activity, and motivate members to disseminate research findings quickly. They do not have to focus only on research. Indeed, there may be value in researchers sharing network infrastructure, which is slow to build and expensive to maintain, with those concerned with education and service development. This could contain the costs and enhance opportunities for collaboration.<sup>20 21</sup>

## Lessons learnt from UK experience

### Networks need organisational coherence

A network is a virtual organisation and requires organisational coherence. Its constitution must define membership criteria, accountability, and authority. Its organisational strategy must address issues of governance and describe the systems to be used to meet its

### Development of primary care research networks in the United Kingdom

**1967:** The weekly returns service was set up by what subsequently became the Birmingham Research Unit of the Royal College of General Practitioners. A group of interested general practitioners started a service to collect morbidity data in the course of normal general practice. This service provides early warning of changes in morbidity rates—for example, from influenza. Over 80 practices contribute data in England and Wales.<sup>5</sup>

Practices from Scotland and Northern Ireland initially took part but later developed their own versions of the service

**1969:** The UK General Practice Research Club was founded. The club met twice a year to support and foster cooperation among interested practitioners. It ceased to exist in 1998 with the expansion of research in primary care.<sup>6</sup> Many of its members are now leaders of primary care research

**1973:** The Medical Research Council developed a group of practices for a study on mild hypertension. From this the General Practice Research Framework evolved. Currently over 1000 practices (about 9% of general practices and 11% of the population in the United Kingdom) are involved in over 20 epidemiological, public health, and health services research projects

**1984:** The Midlands Research Network was set up by an academic department of general practice with some regional NHS funding. Its primary aim was to develop, train, and maintain a network of practices to participate in a range of primary care research

**1993:** The Northern Primary Care Research Network and the Wessex Research Network were formed. After they were established, these networks became funded by NHS research and development funds. They aimed to increase the capacity for research in primary care through the provision of research training and links with academic institutions. They also aimed to increase the quantity of research by fostering research ideas, undertaking pilot studies, enabling researchers to access research funds, and providing channels for developing cooperative and multicentre research

**1995:** Ten research practices in the South and West region were funded by the NHS Executive<sup>7</sup>

**1996:** Start of a widespread expansion of primary care research networks mostly funded through NHS research and development funds

**1998:** Establishment of UK Federation of Primary Care Research Networks. Over 30 networks are currently members

objectives. It must evaluate its activities and provide an annual appraisal of its activities in the form of a report. Insufficient evidence is available about how networks can best achieve their competing aims of producing high quality research, transforming cultures, and engaging all practitioners in reflective inquiring practice.

A typology we find useful describes network leadership to be “top down,” “bottom up,” or “whole system.” The three networks described on the *BMJ's* website illustrate these three approaches. The Israeli Family Practice Research Network (Rambam) illustrates bottom up leadership. Practitioners develop their own ideas and the network is led by a peer group. This is a good approach for facilitating grass roots participation because it works from the interests of the practitioners themselves. France's National College of Teachers in General Practice illustrates top down leadership in that it has strong institutional links and research projects are led by experts. This is a good approach for producing high quality research quickly. The West London Research Network illustrates whole system leadership. It has a multidisciplinary executive and develops coalitions of interested people that include novices and experts. This is a good approach for producing cultural change because different enthusiasts in different parts of the healthcare system become involved. Closer examination

of the operation of these three networks, however, shows that their modes of operation are more complicated than they initially appear.

Harvey et al evaluated five London primary care research networks.<sup>22</sup> They found that although each network had a dominant mode of operation, they all had at least some features of top down, bottom up, and whole system leadership. It seems that these approaches are not mutually exclusive. Each has merit. An important question is how these different approaches to leadership can be made mutually enhancing. Networks may need aspects of each, sensitively adapted to the local circumstance. We need to explore further the theoretical basis of effective network operation.

#### Members need to be motivated and effort sustained

People are motivated to take part in research through networks when they freely see it to be in their own interest and when they can easily see that they can afford the time. If effort is to be sustained participants also need to be supported through problems. A research network is unlikely to be successful in the long term without ongoing attention to these factors. The main method of support may reflect the organisational structure of the network. Methods include peer support, academic support, and support from people with similar interests. However, most networks will have a complex interplay of support mechanisms, and new networks may benefit from planning multifaceted support.

#### Develop synergy with other local services

Researchers in networks can share the goal of sustainable reflective practice with professionals concerned with education in primary care, service development, and quality assurance. Practitioners working in these different areas may benefit from collaboration. The benefits include cross pollination of ideas, sharing of effort, and ultimately sharing of organisational structures.

#### Looking forward

The future development of networks in England needs to be understood in the context of another important development in primary care—primary care groups. These are clusters of 20-30 general practices that are allied with other local health service providers to serve geographical areas of about 100 000 people. They have responsibilities for addressing health inequalities, commissioning health services, and developing local health services. The groups are intended soon to become independent primary care trusts with financial control of the local health services. This could provide the structural opportunity for “health communities,” where research and development become relevant to and integrated with each other.<sup>23 24</sup>

Primary care groups and trusts potentially offer research networks an opportunity to enhance motivation, sustainability, and synergy with local services. Informal and formal contact between local practitioners with different interests could make research partnerships easier. Primary care trusts also potentially provide a political mechanism whereby different resources can be brought together locally to maintain a network for

several related purposes. They offer common ground—a shared geographical area—for quantitative and qualitative research methods to be simultaneously applied to develop local services. Thus, the historical conflict of values between public health practitioners, general practitioners, and service developers<sup>25</sup> could be reconciled as each experiences the value of the others.

There are many cultural and practical obstacles in the way of implementing this idea. Primary care research networks are well placed to explore these obstacles and help facilitate “joined up” support for quality in primary care. The result could be improved community and patient experience of primary health care as well as high quality research that is increasingly relevant to primary care.

We thank Jeffrey Borkan and Dominique Huas for information about research networks in France and Israel given on the *BMJ's* website.

Funding: All authors hold academic posts and are funded by the NHS in England.

Competing interests: All authors are engaged in work related to the development of primary care research networks in the NHS in England.

- 1 Heath I. The specialist of the discipline of general practice. *BMJ* 2000;320:326-7.
- 2 Olesen F, Dickinson J, Hjortdahl P. General practice—time for a new definition. *BMJ* 2000;320:354-7.
- 3 Thomas P. The research needs of primary care. *BMJ* 2000;321:2-3.
- 4 Mant D. *R&D in primary care. National working group report*. London: HMSO, 1997.
- 5 Fleming DM, Ross A. *Weekly returns report for 1998*. Birmingham: Birmingham Research Unit of the Royal College of General Practitioners, 1999.
- 6 Jones R, Fitton P. General practice research: deaths and entrances. *Br J Gen Pract* 1998;48:873.
- 7 Pereira Gray D. Research general practices. *Br J Gen Pract* 1995;45:516-7.
- 8 Department of Health. *Research and development for a first class service. R&D funding in the new NHS*. Leeds: HMSO, 2000.
- 9 Hay E M, Paterson S M, Lewis M, Hosie G, Croft P. Pragmatic randomised controlled trial of local corticosteroid injection and naproxen for treatment of lateral epicondylitis of elbow in primary care. *BMJ* 1999;319:964-8.
- 10 O'Neill P, Kelly P. Postal questionnaire study of disability in the community associated with psoriasis. *BMJ* 1996;313:919-21.
- 11 Bradley F, Wiles R, Kinmonth A-L, Gantley M. Development and evaluation of complex interventions in health services research: case study of the Southampton heart integrated care project (SHIP). *BMJ* 1999;318:711-5.
- 12 Jolly K, Bradley F, Sharp S, Smith H, Thompson S, Kinmonth AL, et al. Randomised controlled trial of follow up care in general practice of patients with myocardial infarction and angina: final results of the Southampton heart integrated care project (SHIP). *BMJ* 1999;318:706-11.
- 13 Robinson G, Gould M. What are the attitudes of general practitioners towards research? *Br J Gen Pract* 2000;50:390-2.
- 14 Medical Research Council. *Primary health care MRC topic review*. London: MRC, 1997.
- 15 NHS Executive. *NHS R&D strategic review—primary care*. London: Department of Health, 1999.
- 16 Russell DB, Ison RL. Enthusiasm: developing critical action for second-order R&D. In: *Agricultural extension and rural development—breaking out of traditions*. Cambridge: Cambridge University Press, 2000:136-60.
- 17 Hickner J. Practice-based network research. In: Bass MJ, Dunn EV, Norton PG, Stewart M, Tudiver F, eds. *Conducting research in the practice setting*. California: Sage, 2000:126-39.
- 18 De Koning K, Martin M, eds. *Participatory research in health: issues and experiences*. London: Zed Books, 1996.
- 19 Macdonald JJ. *Primary health care*. London: Earthscan Publications, 1992.
- 20 Griffiths F, Wild A, Harvey J, Fenton E. The productivity of primary care research networks. *Br J Gen Pract* 2000;50:913-5.
- 21 Clement S, Pickering A, Rowlands G, Thiru K, Candy B, De Lusignan S. Towards a conceptual framework for evaluating primary care research networks. *Br J Gen Pract* 2000;50:651-2.
- 22 Harvey J, Fenton E, Sturt J. *Evaluation of primary care R&D networks in North Thames region*. Warwick: Warwick Business School, 2000.
- 23 Thomas P, Kai J, O'Dwyer A, Griffiths F. Primary care groups and research networks: opportunities for R&D in context. *Br J Gen Pract* 2000;50:91-2.
- 24 Kai J, Hedges C. Minority ethnic community participation in needs assessment and service development in primary care: perceptions of Pakistani and Bangladeshi people about psychological distress. *Health Expectations* 1999;2:7-20.
- 25 Pratt J. *Practitioners and practices—a conflict of values?* Oxford: Radcliffe Medical Press, 1995.

(Accepted 21 December 2000)